RALOY

User Manual

RN117 / RN119 - Series

Features & Benefits:

- 1U console, short depth design, server rack or relay rack mount
- Modular scalability: KVM Switch, Peripherals & More
- Combo interface w/ PS/2 or USB input to console
- 17" Samsung LCD w/ Hi-Resolution (1280 x 1024)
- Latching front handle & two point lock system
- 6 foot Combo KVM cable included

Modular Scalability:

- Multi-platform KVM switch capability: PS/2, USB or Sun
- Mouse: Touchpad(e) or Trackball(b)
- Keyboard available in 13 languages
- DC power options: 48V, 24V or 12V
- VGA Broadcast-grade input
    - or Audio or S-Video + Composite (BNC)
    - or HDMI
    - or DVI-D

Contents

Chapter 1 Getting Started 3

1.1 Important Safeguards 3

1.2 Regulatory Notice 4

Legal Information 4

Safety Instructions 4

Regulatory Notices Federal Communications Commission (FCC) 4

1.3 Package Contents 5

1.4 Before Installation 6

1.5 Unpacking 6

1.6 Optional Accessories 6

1.7 Default Password & Reset Diagram 7

1.8 Structure Diagram 8

1.9 Installation 9-10

1.10 How to use the slides 11

1.11 How to use the LCD Keyboard Drawer 12

1.15 RN117/119 (Single console) – PS/2 KVM Connection 13

1.16 RN117/119 (Single console) – USB KVM Connection 14

Chapter 2 Operation 15

2.1 On-screen Display Operation 15

2.2 On-screen Menu 16

Chapter 3 Standard Specifications 17

3.1 Specifications 17

3.2 Keyboard & Mouse 18

Chapter 4 Optional Specifications 19

4.1 KVM Options 19

4.2 DVI-D Option 19

4.3 BNC + S-Video Option 20

4.4 Audio Option 20

4.5 DC Power Options 21

Chapter 5 Troubleshooting 21

Chapter 6 Dimensions 22

Chapter 1 Getting Started

1.1 Important Safeguards

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
  - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
  - Repair or attempted repair by anyone not authorized by us.
  - Any damage of the product due to shipment.
  - Removal or installation of the product.
  - Causes external to the product, such as electric power fluctuation or failure.
  - Use of supplies or parts not meeting our specifications.
  - Normal wear and tear.
  - Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

1.2 Regulatory Notice

Legal Information
First English printing, October 2002

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

Safety Instructions

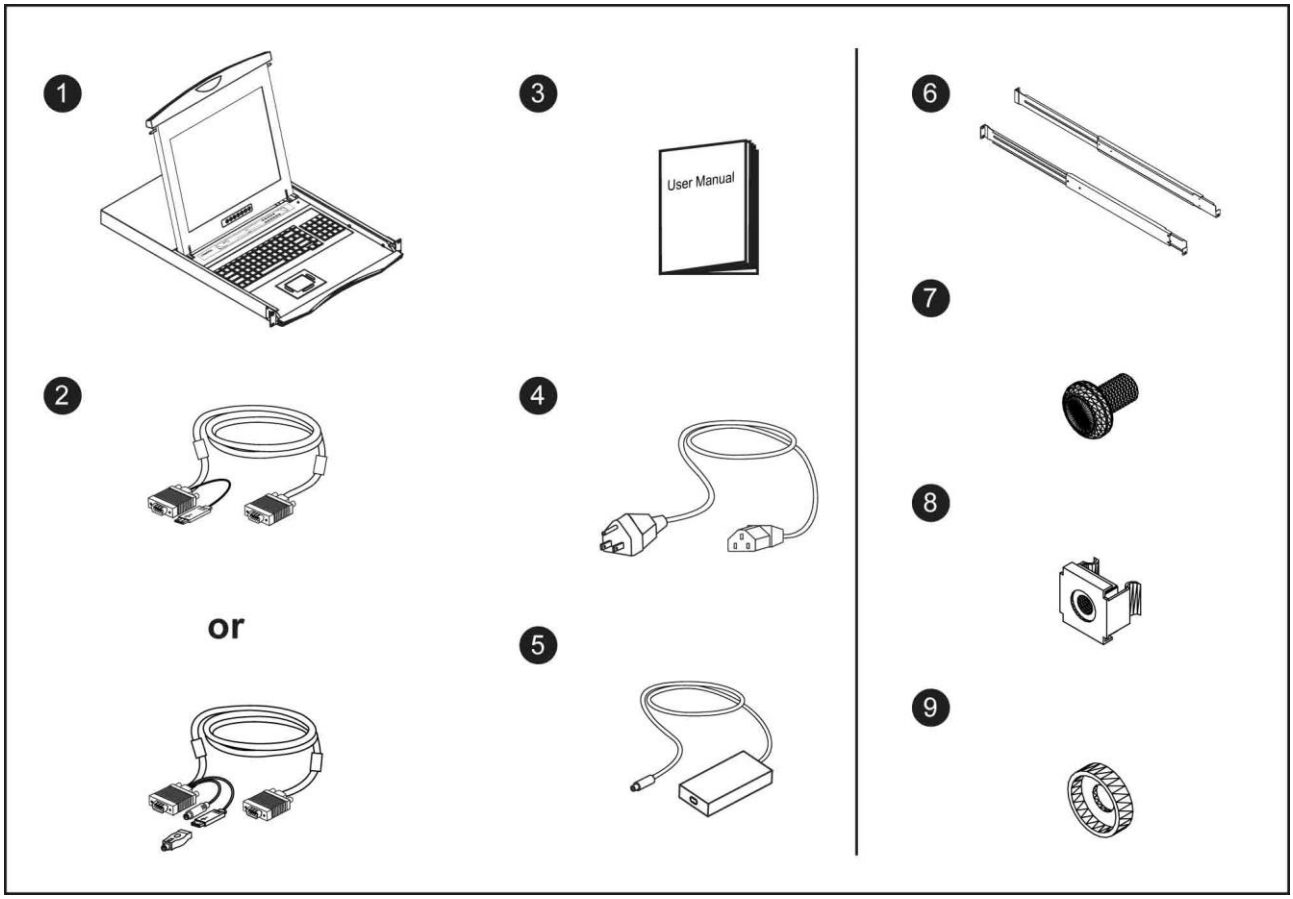
- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40º Celsius (104º Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the drawer is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

CAUTION: Slide/rail mounted equipment is not to be used as a shelf or a work space.

Regulatory Notices Federal Communications Commission (FCC)
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
Any changes or modifications made to this equipment may void the user's authority to operate this equipment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-position or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

1.3 Package Contents



1) LCD keyboard drawer x 1 pc
2) RCE-6 Combo 4-in-1 KVM cable x 1 pc
3) User manual x 1 pc
4) Power cord x 1 pc
5) Auto switch power adapter (for external power version) x 1 pc
6) Mounting bracket x 2 pcs
7) M6*15mm screw x 8 pcs
8) M6 cage nut x 8 pcs
9) Cup washer x 8 pcs

1.4 Before Installation

- It is very important to place the LCD Keyboard Drawer in a suitable environment.
- The surface for placing and fixing the LCD Keyboard Drawer should be stable and level or mounted into a suitable cabinet.
- Make sure the location is well ventilated, out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.
- Position LCD Keyboard Drawer with respect to related facilities.

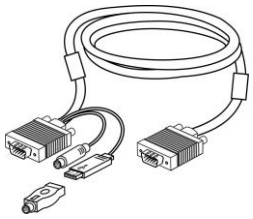
1.5 Unpacking

The LCD keyboard drawer comes with the standard parts as shown in the package contents. Check and make sure they are included and in good condition. If anything is missing, or damage, contact the supplier immediately.

1.6 Optional Accessories

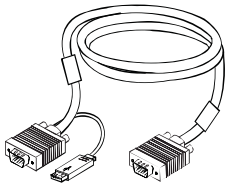
1. Combo 4-in-1 KVM cable

1.1 RCE-6 6 feet
1.2 RCE-10 10 feet
1.3 RCE-15 15 feet



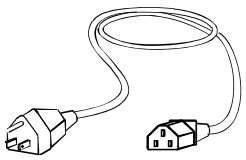
2. USB 2-in-1 KVM cable

2.1 RCB-10 10 feet
2.2 RCB-15 15 feet



3. **Power Cord**

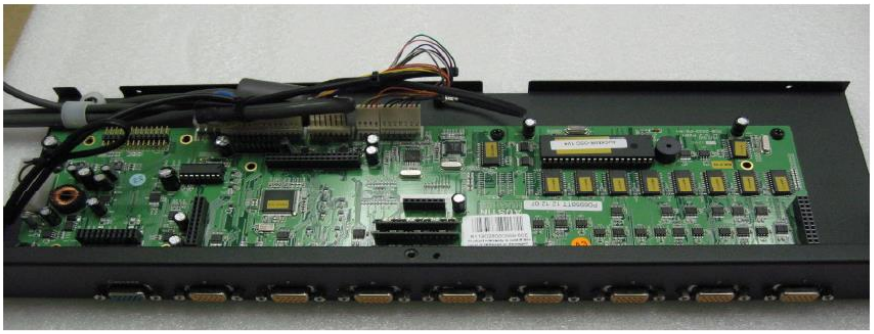
3.1 IEC power cord
3.2 REC-NEMA 5-15 power cord (US)
3.3 REC-BS 1363 power cord (UK)
3.4 REC-CEE 7/4 power cord (German)
3.5 REC-AS 3112 power cord (Australia)

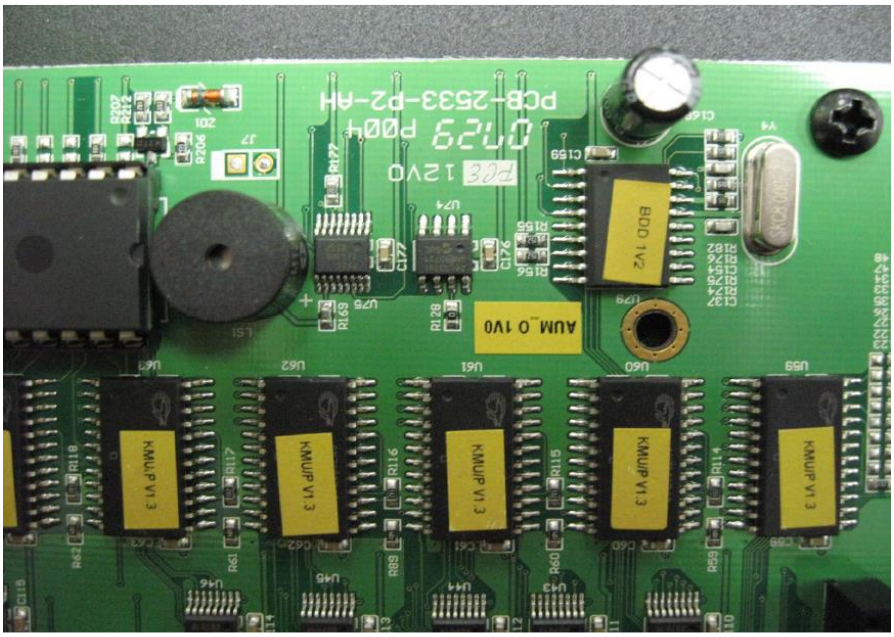


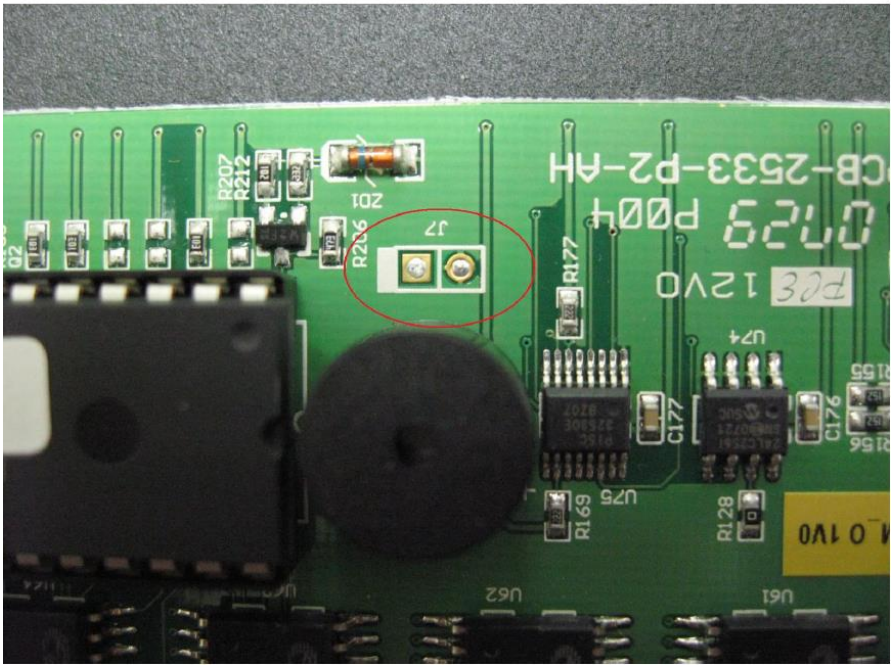
1.7 Default KVM Password & Reset Diagram

The user name & password can be reset to default "**00000000**" (8 digits of zero via keyboard not 10Key)

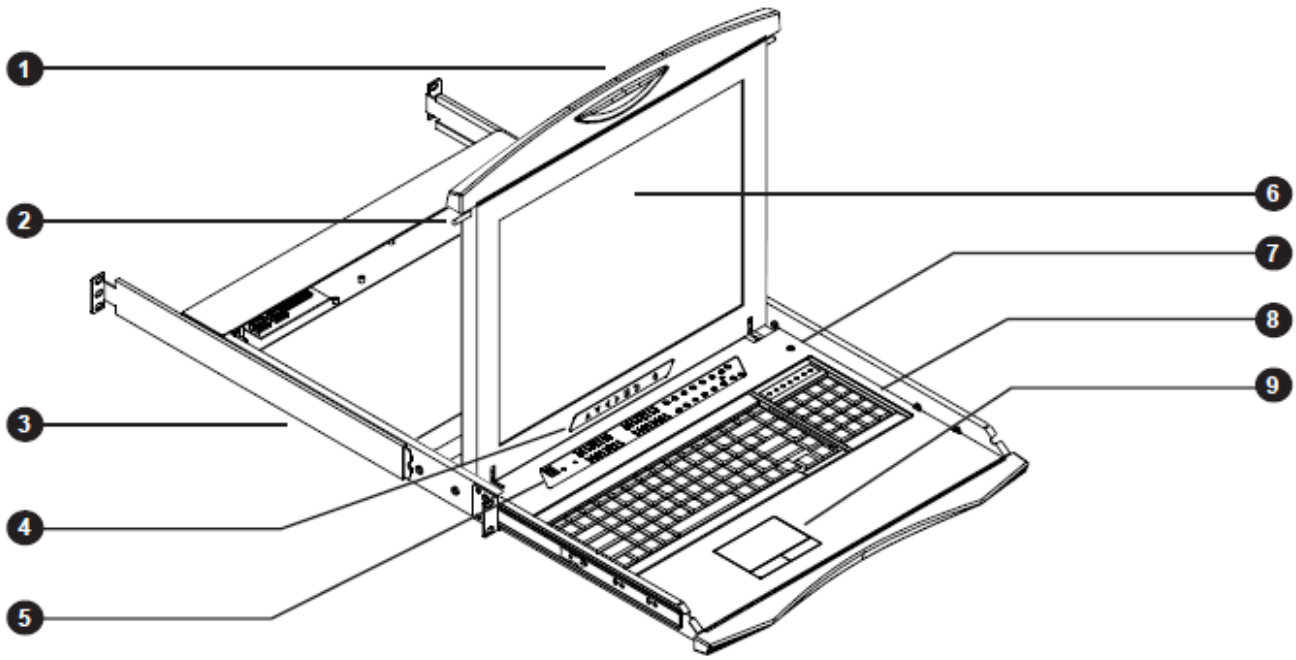
1) The KVM password can be reset on the KVM PCB board
2) Open the KVM top metal cover
3) Find the jumper **J7**, then use either paper clip or scissors to touch the two boxes of J7 in order to close/short the jumper 5 ~ 10 second







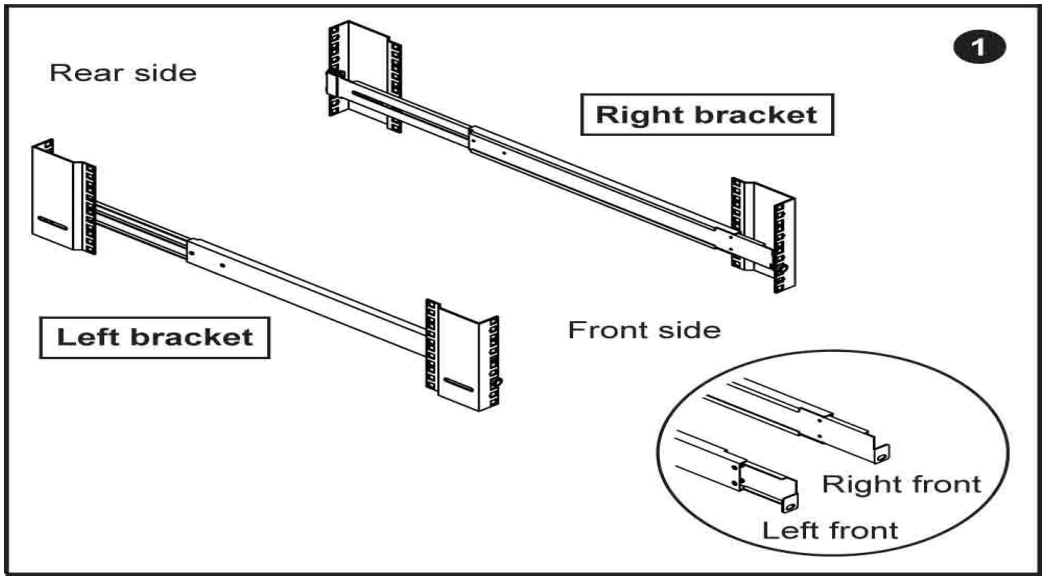
1.8 Structure Diagram



① Carry handle to release the 2-pt lock
② 2-point lock
③ Installation Slides
④ LCD membrane
⑤ Membrane switch (KVM option)
⑥ LCD interchangeable module kit
⑦ Micro switch for screen auto power off
⑧ Keyboard interchangeable module kit
⑨ Mouse interchangeable module kit

1.9 Installation

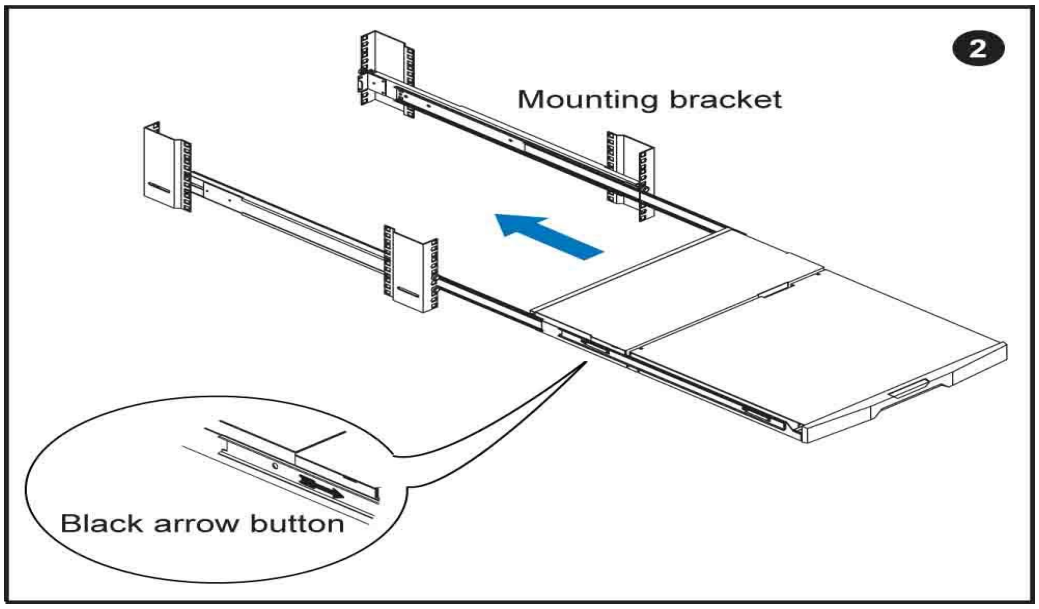
1



- Attach the left and right mounting bracket to rack 19” mounting rails.
- Adjust the rear mounting bracket to fit your rack.
- M6 screw and cup washer x 6 pcs included.

Caution: Leaving all M6 screw slightly loose, until you complete the installation in **3**

2



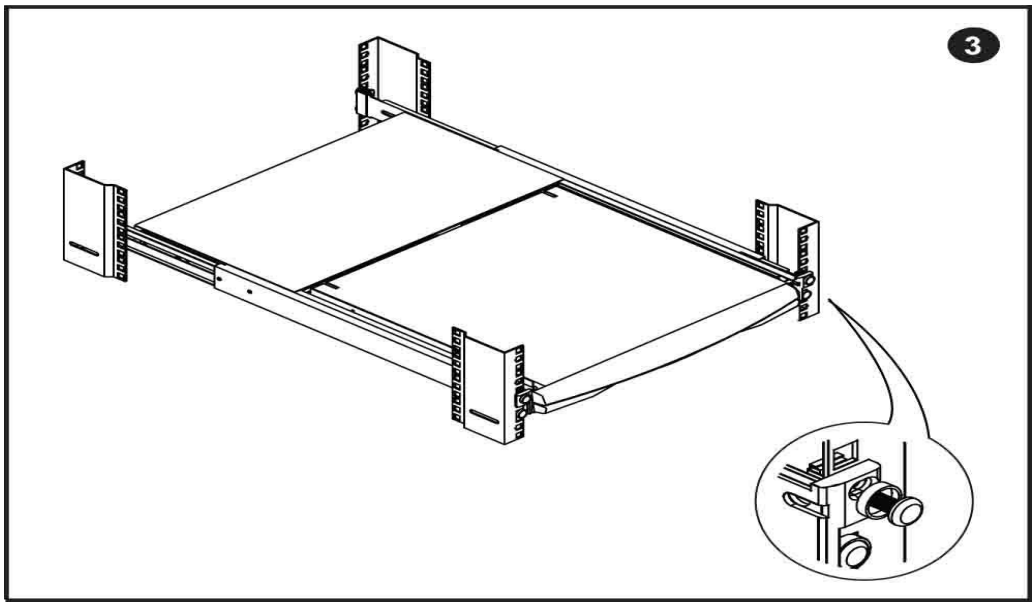
- Pull out left & right inner slide members
- Pick up the LCD tray.
- Insert the LCD tray into the mounting bracket.
- Pull and hold the left & right black arrow buttons on the rails.
- Return the LCD tray to park position.

1.9 Installation (continued)

3

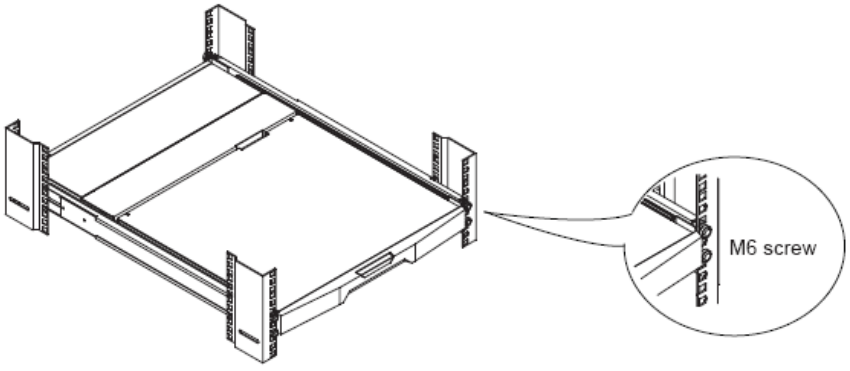
- Attach front left and right mounting ears of the LCD keyboard drawer to vertical mounting rails.
- Fix the ***rear kit*** to the mounting bracket by M6 screw and cup washer x 2 pcs included.

Caution: This step is necessary. Failure to complete this will cause damage.



4 **Complete the installation**

- Tighten all 8 pcs of M6 screw to complete the installation.



Remarks:

- RNBK-01 is for RN117 / 119 series only.

1.10 How to use the slides

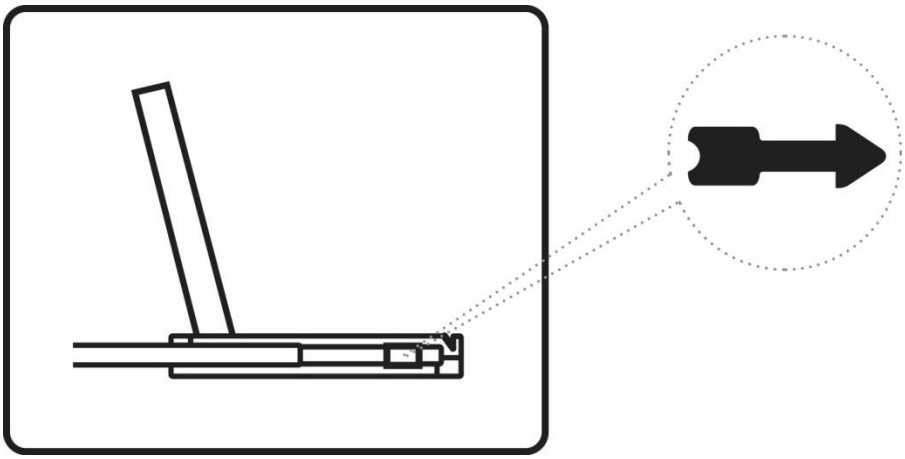


Figure 1.

- A black arrow release button is located on the outside of each slide. (shown in **Figure 1**).

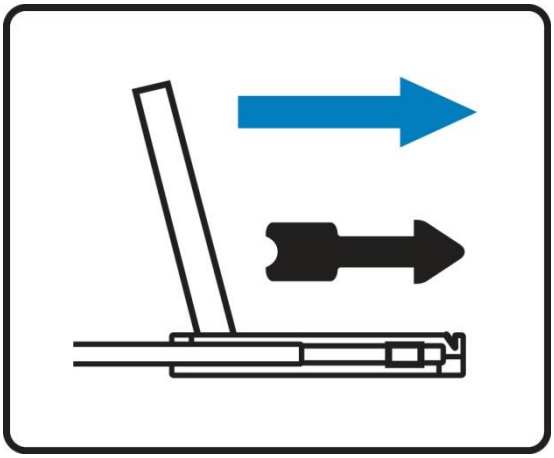


Figure 2.

- Pull and hold the black arrow button on either side of the LCD keyboard drawer to unlock. (shown in **Figure 2**).

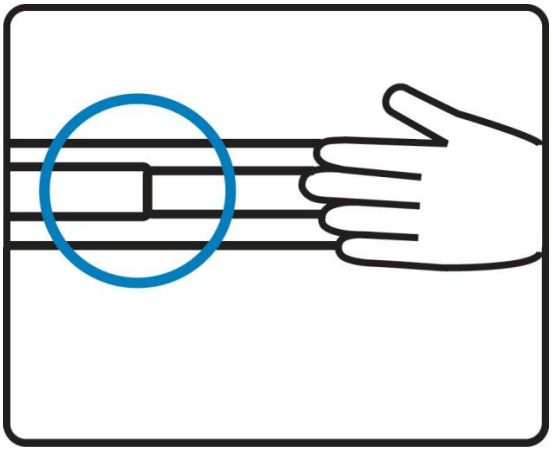


Figure 3.

- Push the LCD keyboard drawer into the rack. (shown in **Figure 3**).

Caution : Keep your fingers away from the slide stop

1.11 How to use the LCD Keyboard Drawer

Figure 4. Sliding out the LCD keyboard drawer by pulling the tab toward the front of LCD.

- Gently pull the tab toward the front of the LCD (shown in **Figure 4)**.

Figure 5. Flipping up the LCD to a suitable angle.

- Flip up the LCD to a suitable angle (shown in **Figure 5)**.

Figure 6. Operating the LCD keyboard drawer

- Operate the LCD keyboard drawer. (shown in **Figure 6**).

1.14 RN117 / 119 (Single console)

- **Use RCE-6 to connect to server via PS/2 interface**

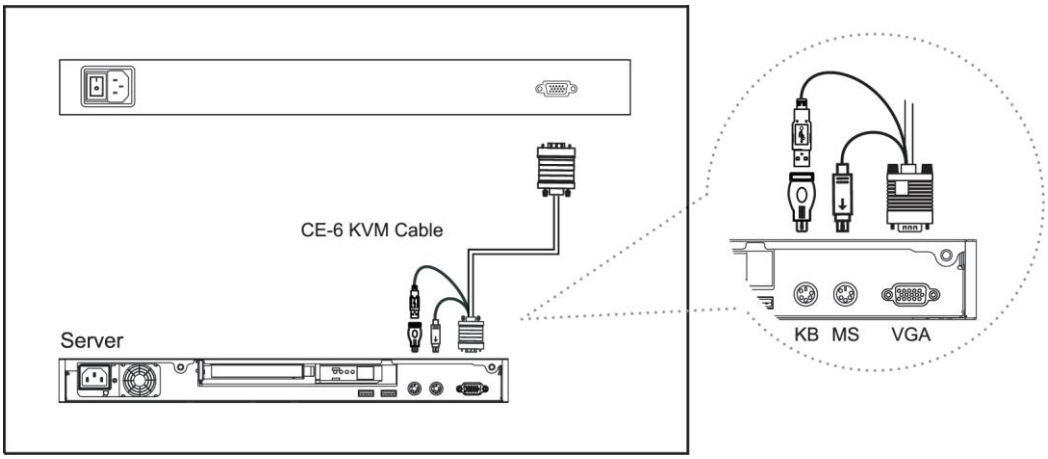


Figure 9. Example of connecting RCE-6 4-in-1 Combo KVM cable to server via PS/2 interface

1.15 RN117 / 119 (Single console)

- **Use RCE-6 to connect to KVM via PS/2 interface**

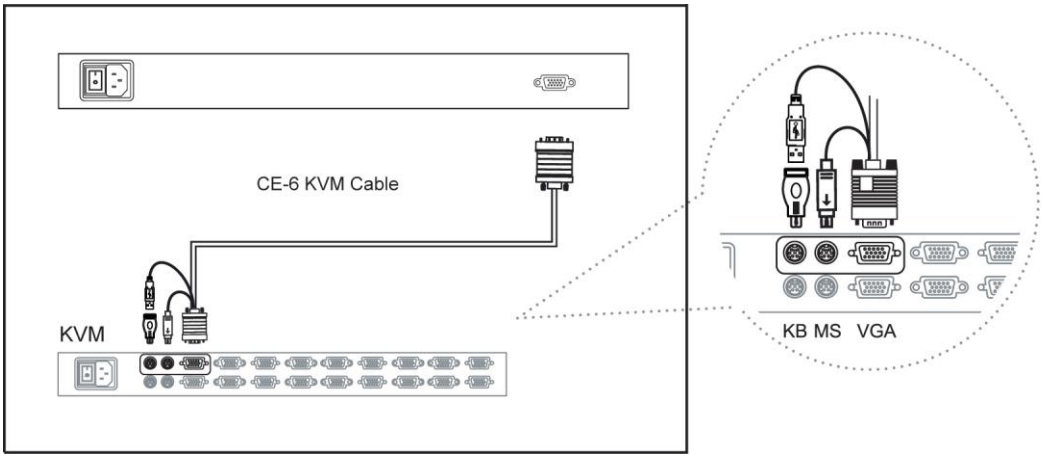


Figure 10. Example of connecting RCE-6 4-in-1 Combo KVM cable to KVM via PS/2 interface

Remarks:

- The above connection is only for the LCD keyboard without KVM switch built-in.
- For the LCD keyboard drawer with KVM switch built-in, please refer to attached KVM switch user manual.

Caution: The LCD keyboard drawer is hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage to the servers, KVM and LCD keyboard drawer. Before attempting to connect anything to the LCD keyboard drawer, we suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the LCD keyboard is receiving power. The company is not responsible for damage caused in this way.

1.16 RN117 / 119 (Single console)

- **Use RCE-6 to connect to server via USB interface**

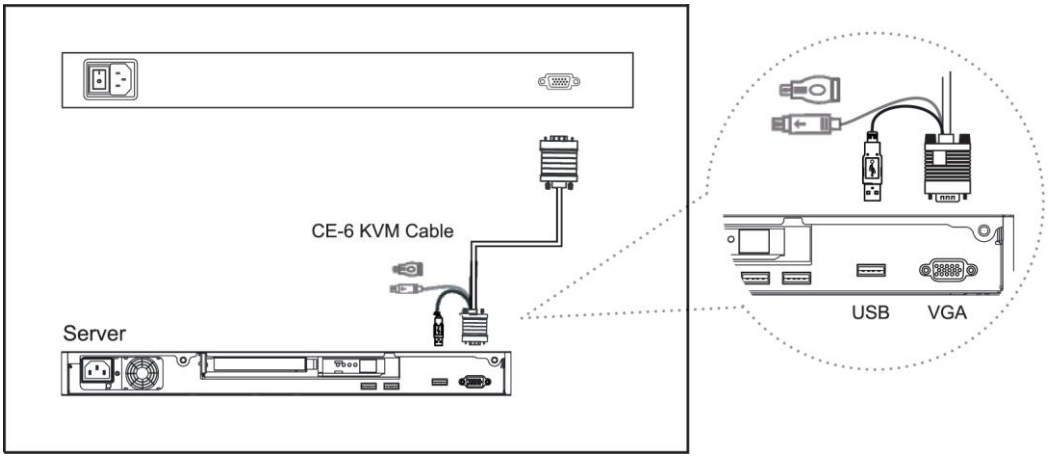


Figure 11. Example of connecting RCE-6 4-in-1 Combo KVM cable to server via USB interface

1.17 RN117 / 119 (Single console)

- **Use RCE-6 to connect to KVM via USB interface**

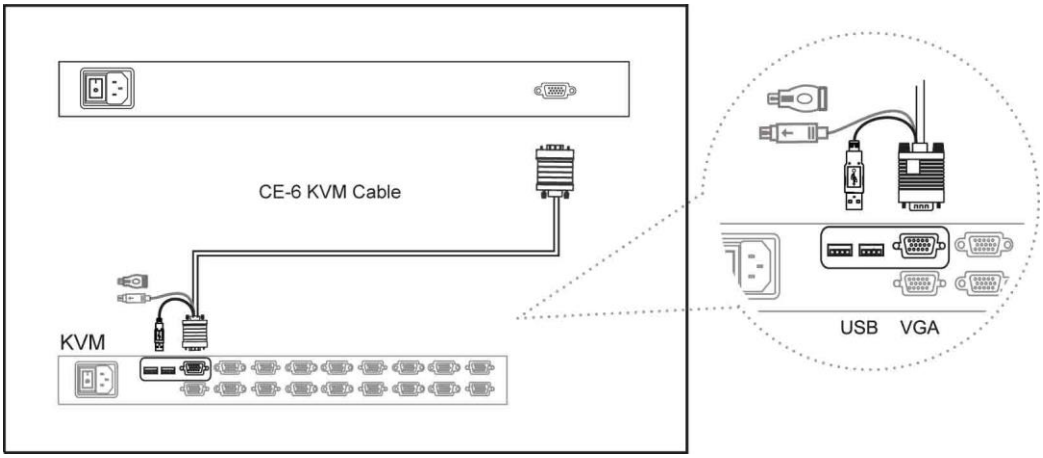


Figure 12. Example of connecting RCE-6 4-in-1 Combo KVM cable to KVM via USB interface

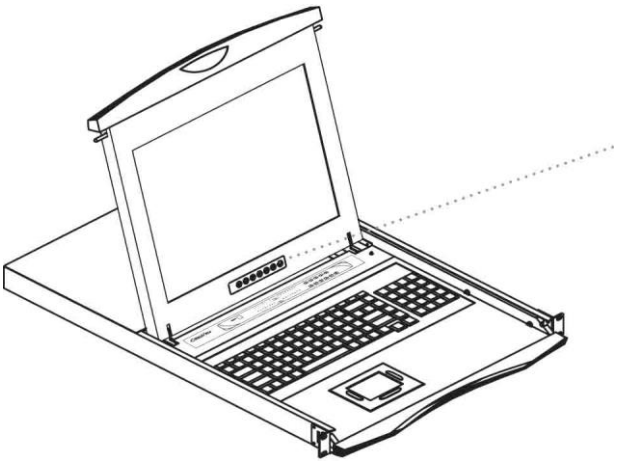
Remarks:

- The above connection is only for the LCD keyboard without KVM switch built-in.
- For the LCD keyboard drawer with KVM switch built-in, please refer to attached KVM switch user manual.

Caution: The LCD keyboard drawer is hot-pluggable, but components of connected devices, such as the servers and KVM switch, may not be hot-pluggable. Plugging and unplugging cables while servers and KVM are powered on may cause irreversible damage to the servers, KVM and LCD keyboard drawer. Before attempting to connect anything to the LCD keyboard drawer, we suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the LCD keyboard is receiving power. The company is not responsible for damage caused in this way.

Chapter 2 Operation

2.1 On-screen Display Operation



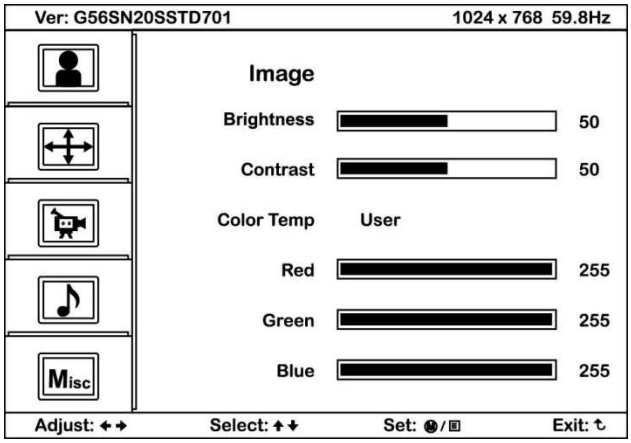
LCD membrane

Membrane Switch	Function
	Power light Green = On Orange = Power saving
	Power on / off LCD
	Display the OSD menu
	Scrolls through menu options and adjusts the displayed control (To auto adjustment by pressing the button for 5 seconds)
	Exit the OSD screen Toggle analog, digital & video connection (DVI-D and video options only)

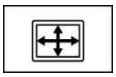
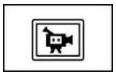
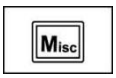
Remark: All LED touch buttons in **WHITE** light.

1. The LED of **Power** touch button will flash continuously when there is no signal input.
2. All the LED touch buttons will automatically turn off after 10 minutes of idle status (except the **Power**).
3. Light up all membrane buttons, please press any button for 1 - 2 seconds (except the **Power**).

2.2 On-screen Menu



OSD Configuration Page

	Image: To enter into the brightness, contrast, colour temp, red, green, and blue
	**Geometry:** To enter into the auto adjust, H position, V position, phase and clock
	**Video:** To enter into the colour, tint, sharpness, noise reduction, DCDi and TV Setup
	Audio: To enter into volume, bass, treble, balance, AVL and mute
	**Misc:** To enter into the language, OSD position, graphic mode, OSD time, ratio, reset and timer

Chapter 3 Standard Specifications

3.1 Specifications

Item	Description	
Form Factor	1U rack mounting on slide-out rails	
LCD Manufacturer	**AUO**	
Series	RN	
Diagonal Size	17" TFT	19" TFT
Max. Resolution	1280 x 1024	1280 x 1024
Brightness (cd/m²)	250	250
Color Support	16.7 M	16.7 M
Contrast Ratio (typ.)	1000:1	1000:1
Viewing Angle (H/V)	160˚ x 160˚	160˚ x 160˚
Display Area (mm)	338 x 270	376 x 301
Tr Response Time (ms)	5	5
LCD Panel MTBF (hrs)	50,000	30,000
VGA Signal Input	Analog RGB, 0.7Vp-p	
Sync. Type	Separate H/V, Composite, SOG	
Resolution	640 x 350 x 70Hz	
	640 x 400 x 70Hz	
	640 x 480 x 60 / 72 / 75Hz	
	720 x 400 x 70Hz	
	800 x 600 x 60 / 72 / 75Hz	
	848 x 480 x 60Hz	
	1024 x 768, 60 / 70 / 75 Hz	
	1152 x 864, 60 / 70 / 75 Hz	
	1280 x 760, 60 / 75 Hz	
	1280 x 960 x 60 Hz	
	1280 x 1024, 60 / 75 Hz	
Plug & Play DDC	EDID 1.3	
Console Port (Combo)	DB-15 connector for VGA / keyboard / mouse (Combo interface)	
Power Input	Auto-sensing 100 to 240VAC, 50 / 60Hz	
Power Consumption	Max. 48 Watt, Standby 5 Watt	
Compatibility	Multi-platform - Mix PCs, SUNs, IBMs, HPs & DELLs.	
Regulation Approval	cUL, FCC & CE certified, RoHS2 & REACH compliant	

Options

KVM Integration	Matrix & combo KVM with IP console and 2-console selection
Keyboard & mouse	Full size keyboard built-in touch-pad / trackball
Graphic Input	DVI-D, S-Video & BNC input
DC Power	DC power input with 12V, 24V, 48V selection

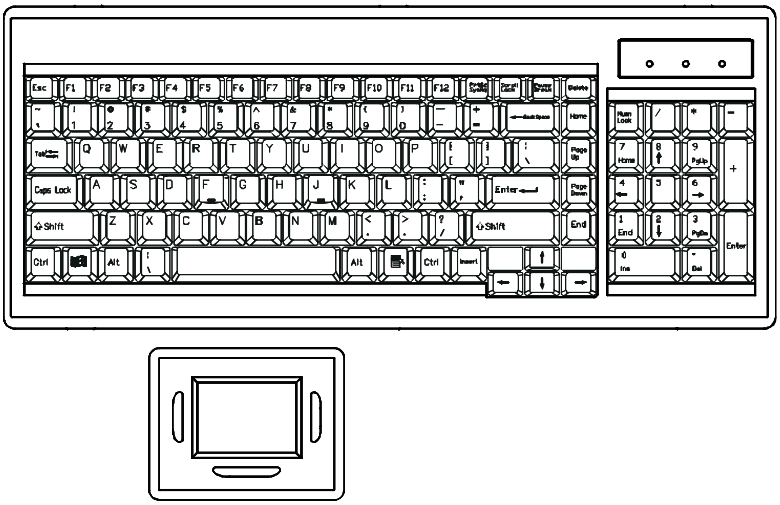
Environmental

Operation	0˚ to 50˚C Degree
Storage	-5˚ to 60˚C Degree
Relative Humidity	5~90%, non-condensing
Shock	10G acceleration (11ms duration)
Vibration	5~500Hz 1G RMS random vibration

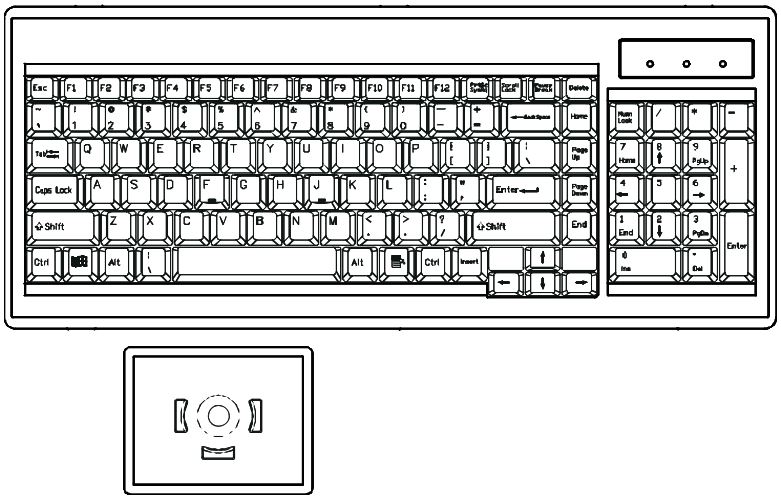
3.2 Keyboard & Mouse

For RN117 / 119 series

Supporting layouts



E: keyboard with touchpad



B: keyboard with trackball

Chapter 4 Optional Specifications

4.1 KVM Options

Our KVM is designed to seamlessly integrate into the rear of our full range of LCD drawer solutions:

- For KVM operation, please refer to KVM user manual

Matrix Cat6 KVM	Local	Remote	IP	8-port	16-port	32-port
	1	1	1	-	RN117 - MUIP1613	RN117 - MUIP3213
	1	1	2	-	RN117 - MUIP1624	RN117 - MUIP3224
	1	1	0	-	RN117 - MU1602	RN117 - MU3202
	1	2	0	-	RN117- MU1603	RN117 - MU3203
	1	3	0	-	RN117 - MU1604	RN117 - MU3204

Combo Cat6 KVM	Local	Remote	IP	8-port	16-port	32-port
	1	0	1	RN117 - UIP802	RN117 - UIP1602	RN117 - UIP3202
	1	1	0	RN117 - U802	RN117 - U1602	RN117 - U3202
	1	0	0	RN117 - U801	RN117 - U1601	RN117 - U3201

Cat6 KVM Dongle : RDG-100S (VGA-USB)/ RDG-100 (VGA-PS/2)/ RDG-100SD (DVI-USB)

Matrix DB-15 KVM	Local	Remote	IP	8-port	16-port	32-port
	1	1	1	RN117 - MIP813	RN117 - MIP1613	-
	1	1	2	RN117 - MIP824	RN117 - MIP1624	-
	1	1	0	RN117 - M802	RN117 - M1602	-
	1	2	0	RN117 - M803	RN117 - M1603	-
	1	3	0	RN117 - M804	RN117 - M1604	-

Combo DB-15 KVM	Local	Remote	IP	8-port	16-port	32-port
	1	0	1	RN117 - IP802	RN117 - IP1602	-
	1	1	0	RN117 - 802	RN117 - 1602	-
	1	0	0	RN117 - S801	RN117 - S1601	-

Combo DB-15 KVM Cable : RCE-6/10/15 (6, 10 or 15 ft.)

DVI-D KVM	Local	Remote	IP	12-port	-	-
	1	0	0	RN117 - 1201D	-	-

DVI-D KVM Cable : RCI-6/15 (6 or 15 ft.)

4.2 DVI-D Option

Internal power version

External power version

3-in-1 VGA KB mouse console port

DVI-D

Remarks:

- Package includes 1 x 6ft DVI-D cable

4.3 BNC + S-Video Option

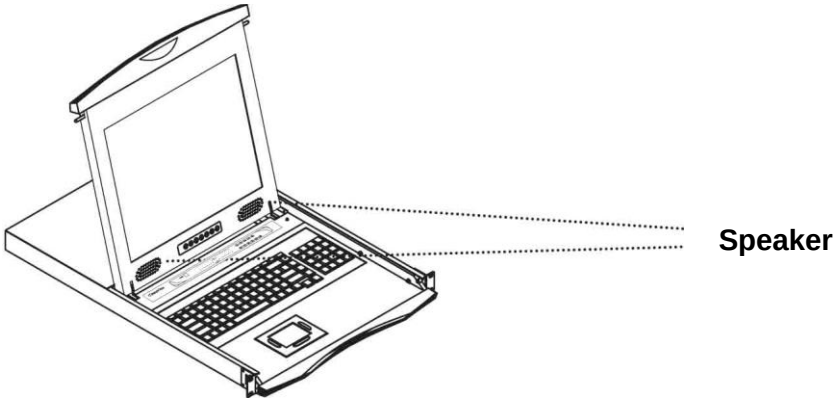
Internal power version

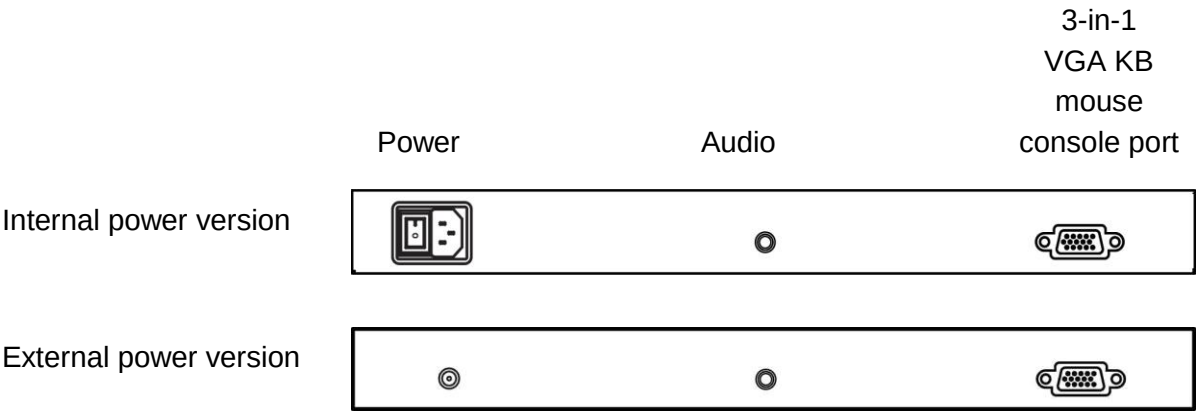
External power version

Remarks:

- Package includes 1 x 6ft S-Video cable

4.4 Audio Option

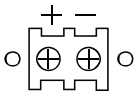




Remarks:

- Audio input is 35mm audio plug
- The speaker is sharing the same power with LCD.

4.5 DC Power Options



Model	12V	24V	48V
Input rating			
Input voltage:	12-Volt	24-Volt	48-Volt
Input range:	9 ~ 18V	18 ~ 36V	36 ~ 75V
Input current			
- No load	50 mA	50 mA	50 mA
- Full load	4950 mA	2450 mA	1220 mA
Output rating			
Output voltage:	12-Volt	12-Volt	12-Volt
Output current:	4.16A	4.16A	4.16A
Efficiency	84%	85%	85%

Remarks:

- Package does not include power cord and AC power adapter

Chapter 5 Troubleshooting

1. **Is interference signal appeared on LCD normal when shutting down the computer?**
   In rare cases, interference may appear on the monitor. This may be caused by signal rate of VGA card and is considered normal. The image quality can be improved by adjusting the phase or pixel rate automatically or manually.

2. **The membrane power light is not ON**
   Press the power ON / OFF on LCD membrane to check if the monitor is in the ON mode. Check the power cord is properly connected to the LCD keyboard drawer and power outlet.

3. **Screen image is not centered or sized properly**
   Press the button for two seconds to automatically adjust the image. Adjust the H-position and V-position settings via On-screen menu.

4. **Is the LCD keyboard drawer hot-pluggable?**
   The LCD keyboard drawer is hot-pluggable, but components of connected devices, such as the servers and KVMs, may not be hot-pluggable. We suggest turning off the power to all devices before connecting them. Apply power to connected devices again only after the LCD keyboard receives power.

5. **How do I adjust the resolution?**
   To change monitor resolution, click Start -> Control Panel -> Display. Select Setting tab to adjust the monitor resolution in Desktop Area. The available resolutions, "640 x 480", "800 x 600", "1024 x 768", "1152 x 864", "1280 x 1024", are determined by the display card in your computer.

Chapter 6 Dimensions

Model	Product Dimension (W x D x H)	Packing Dimension (W x D x H)	Net Weight	Gross Weight
RN117 series	442 x 500 x 44 mm 17.4 x 19.7 x 1.73"	589 x 856 x 168 mm 23.2 x 30.2 x 5.5"	12.3 kg 27.1 lb	16.5 kg 36 lb
RN119 series	442 x 500 x 44 mm 17.4 x 19.7 x 1.73"	589 x 856 x 168 mm 23.2 x 30.2 x 5.5"	12.5 kg 27.5 lb	17 kg 37.4 lb

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